

EAST - [default.wsp:1]

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BRS form

IS&R form

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	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Err
1	IS&R	L1	6	((("5413779") or ("5310912"	USPAT	2003/04/02			0
2	IS&R	L2	2	((("5853696") or ("5698179"	USPAT	2003/04/02			0
3	BRS	L3	8724	dopamine or tropan\$ or coc	USPAT	2003/04/02			0
4	BRS	L4	90	nortropan\$	USPAT	2003/04/02			0
5	BRS	L5	8747	3 or 4	USPAT	2003/04/02			0
6	BRS	L6	177	424/1.85-1.89.ccls.	USPAT	2003/04/02			0
7	BRS	L7	61	6 and 5	USPAT	2003/04/02			0
8	BRS	L8	56	7 not 1	USPAT	2003/04/02			0
9	BRS	L9	54	8 not 2	USPAT	2003/04/02			0
10	BRS	L10	765	424/1.65-1.69.ccls.	USPAT	2003/04/02			0
11	BRS	L11	39	10 and 3	USPAT	2003/04/02			0
12	BRS	L12	29	11 not 7	USPAT	2003/04/02			0
13	BRS	L13	886	(dopamine or tropan\$ or co	USPAT	2003/04/02			0
14	BRS	L14	10	10 and 13	USPAT	2003/04/02			0
15	BRS	L15	371	546/126-132.ccls.	USPAT	2003/04/02			0
16	BRS	L16	498	546/124-132.ccls.	USPAT	2003/04/02			0
17	BRS	L17	105	16 and 13	USPAT	2003/04/02			0
18	BRS	L18	94	17 not 7	USPAT	2003/04/02			0
19	BRS	L19	91	18 not 11	USPAT	2003/04/02			0

Hits

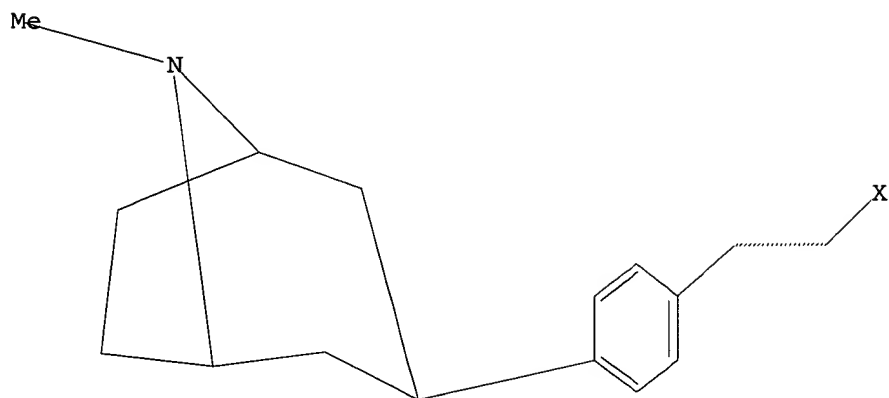
Details

HTML

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NUM

> D L1  
L1 HAS NO ANSWERS  
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> D HIST

(FILE 'HOME' ENTERED AT 13:09:51 ON 13 JUN 2003)

FILE 'REGISTRY' ENTERED AT 13:10:02 ON 13 JUN 2003

L1 STRUCTURE UPLOADED

L2 0 S L1

L3 1 S L1 FULL

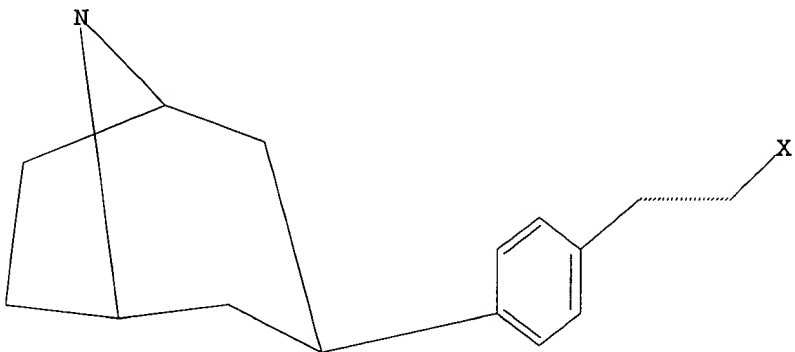
FILE 'CAPLUS' ENTERED AT 13:10:43 ON 13 JUN 2003

L4 1 S L3

=>

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D L5  
L5 HAS NO ANSWERS  
L5 STR



Structure attributes must be viewed using STN Express query preparation.

=> D HIST

(FILE 'HOME' ENTERED AT 13:09:51 ON 13 JUN 2003)

FILE 'REGISTRY' ENTERED AT 13:10:02 ON 13 JUN 2003

L1 STRUCTURE UPLOADED  
L2 0 S L1  
L3 1 S L1 FULL

FILE 'CAPLUS' ENTERED AT 13:10:43 ON 13 JUN 2003

L4 1 S L3

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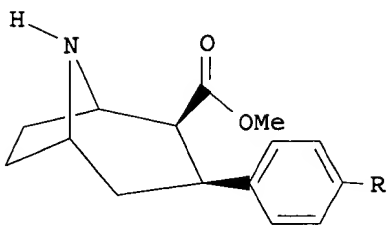
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L6 2 S L5  
L7 25 S L5 FULL

FILE 'CAPLUS' ENTERED AT 14:10:12 ON 13 JUN 2003

L8 7 S L7

=> D L8 ABS BIB 1-7

L8 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2003 ACS  
GI



AB 2.beta.-Carbomethoxy-3.beta.-(4'-((Z)-2-iodoethenyl)phenyl)nortropane [ZIENT; I [R = CH:CHI-(Z)]] and 2.beta.-carbomethoxy-3.beta.-(4'-((E)-2-iodoethenyl)phenyl)nortropane [EIENT; I [R = CH:CHI-(E)]] were prepd. and evaluated in vitro and in vivo for serotonin transporter (SERT) selectivity and specificity. High specific activity [<sup>123</sup>I]ZIENT and [<sup>123</sup>I]EIENT were synthesized in 45% (n = 5) and 42% (n = 4) radiochem. yield (decay-cor. to end of bombardment (EOB)), resp., by prepn. of the precursor carbomethoxy-3.beta.-(4'-((Z)-2-trimethylstannylethenyl)phenyl)nortropane [I {R = CH:CHSnMe<sub>3</sub>-(Z)}] and 2.beta.-carbomethoxy-3.beta.-(4'-((E)-2-tributylstannylethenyl)phenyl)nortropane [I {R = CH:CHSnMe<sub>3</sub>-(E)}], resp., followed by treatment with no carrier-added sodium [<sup>123</sup>I]iodide and hydrogen peroxide in ethanolic HCl. Competition binding in cells stably expressing the transfected human SERT, dopamine transporter (DAT), and norepinephrine transporter (NET) using [<sup>3</sup>H]citalopram, [<sup>3</sup>H]WIN 35,428, and [<sup>3</sup>H]nisoxetine, resp., demonstrated the following order of SERT affinity (K<sub>i</sub> in nM): ZIENT (0.05) > nor-CIT (0.12) .mchgt. EIENT (1.15) > fluvoxamine (1.46). The affinity of ZIENT and EIENT for DAT was 69 and 1.6-fold lower, resp., than for SERT. In vivo biodistribution and blocking studies were performed in male rats and demonstrated that the brain uptake of [<sup>123</sup>I]ZIENT was selective and specific for SERT-rich regions (hypothalamus, striatum, pons, and prefrontal cortex). SPECT brain imaging studies in monkeys demonstrated high [<sup>123</sup>I]ZIENT uptake in the diencephalon, which resulted in diencephalon-to-cerebellum ratios of 2.12 at 190 min. [<sup>123</sup>I]ZIENT uptake in the diencephalon achieved transient equil. at 157 min. In a displacement expt. of [<sup>123</sup>I]ZIENT in a cynomolgus monkey, radioactivity was reduced by 39% in the diencephalon at 101 min following injection of citalopram. The high specific activity one-step radiolabeling prepn. and high selectivity of [<sup>123</sup>I]ZIENT for SERT support its candidacy as a radioligand for mapping brain SERT sites.

AN 2003:120368 CAPLUS

DN 138:321419

TI Synthesis and Characterization of Iodine-123 Labeled 2.beta.-Carbomethoxy-3.beta.-(4'-((Z)-2-iodoethenyl)phenyl)nortropane. A Ligand for in Vivo Imaging of Serotonin Transporters by Single-Photon-Emission Tomography  
AU Goodman, Mark M.; Chen, Ping; Plisson, Christophe; Martarello, Laurent; Galt, James; Votaw, John R.; Kilts, Clinton D.; Malveaux, Gene; Camp, Vernon M.; Shi, Bing; Ely, Timothy D.; Howell, Leonard; McConathy, Jon; Nemeroff, Charles B.

CS Department of Radiology, Emory University, Atlanta, GA, 30320, USA

SO Journal of Medicinal Chemistry (2003), 46(6), 925-935

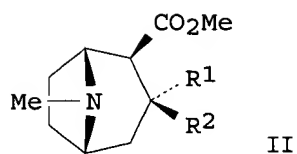
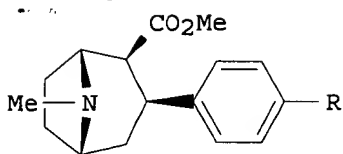
CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

LA English

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT



AB Substituted 3.beta.-phenyltropane-2.beta.-carboxylic acid Me esters I [R = Ph(CH<sub>2</sub>)mC.tplbond.C, HO(CH<sub>2</sub>)<sub>4</sub>, Ph(CH<sub>2</sub>)<sub>n</sub>; m = 0-3; n = 2-5] are prepd. and evaluated for binding at the dopamine transporter to define the pharmacophore of the cocaine binding site at the dopamine transporter. I [R = Ph(CH<sub>2</sub>)mC.tplbond.C, HO(CH<sub>2</sub>)<sub>4</sub>; m = 0-3] are prepd. by Sonogashira coupling reactions of alkynes with I (R = I); hydrogenation yields the tropanecarboxylates I [R = Ph(CH<sub>2</sub>)<sub>n</sub>; n = 2-5]. Negishi coupling of I (R = I) with Ph, benzyl, or .alpha.-styrylzinc chlorides yields I [R = Ph, PhCH<sub>2</sub>, PhC(:CH<sub>2</sub>)]. I [R = (E)-PhCH:CH, (Z)-PhCH:CH, PhCH<sub>2</sub>CH:CH] could not be prepd. by hydrogenation of I [R = Ph(CH<sub>2</sub>)mC.tplbond.C; m = 0-1]; Stille coupling of I (R = I) with (E)- and (Z)-(Me<sub>3</sub>Sn)CH:CH(SnMe<sub>3</sub>) followed by iododestannylation, sepn. of stereoisomers, and Negishi coupling with phenylzinc or benzylzinc chlorides successfully yields I [R = (E)-PhCH:CH, (Z)-PhCH:CH, PhCH<sub>2</sub>CH:CH]. Naphthyltropanecarboxylates II (R<sub>1</sub> = H, 2-naphthyl; R<sub>2</sub> = 2-naphthyl, H) are prepd. in a two-step sequence using Suzuki coupling of 2-naphthylboronic acid with a (triflyloxy)didehydrotropanecarboxylate followed by redn. of the unsatd. ester with SmI<sub>2</sub> and protonation of the enolate with trifluoroacetic acid. The presence of a previously unknown remote binding domain in the cocaine binding site of the dopamine transporter is indicated by the binding affinities of I [R = Ph(CH<sub>2</sub>)mC.tplbond.C, HO(CH<sub>2</sub>)<sub>4</sub>, Ph(CH<sub>2</sub>)<sub>n</sub>; m = 0-3; n = 2-5]. I (R = PhCH<sub>2</sub>CH<sub>2</sub>) binds to DAT with an IC<sub>50</sub> value of 5.14 nM; decreasing or increasing the length of the pendant phenylethyl moiety by one methylene group decreases the IC<sub>50</sub> values of I by factors of 102 and 68, resp. I (R = PhCH<sub>2</sub>CH<sub>2</sub>) binds nonselectively to monoamine transporters such as the serotonin and norepinephrine transporters. Electrostatic effects contribute significantly to the binding affinity of I to the dopamine transporter. The binding affinities of I suggest the existence of a more distant binding domain from the tropane rings of I in the cocaine binding site of the dopamine transporter. Steric barriers to binding of compds. to the cocaine binding site of the dopamine transporter must be overcome for high binding affinity. I (R = PhCH<sub>2</sub>C.tplbond.C) is the most potent of the tropanecarboxylates tested for binding to the dopamine transporter with a IC<sub>50</sub> value of 1.82 nM; this compd. also binds tightly to the serotonin and norepinephrine transporters.

AN 2002:581988 CAPLUS

DN 137:294860

TI Synthesis and Transporter Binding Properties of 3.beta.-[4'-(Phenylalkyl, -phenylalkenyl, and -phenylalkynyl)phenyl]tropane-2.beta.-carboxylic Acid Methyl Esters: Evidence of a Remote Phenyl Binding Domain on the Dopamine Transporter

AU Blough, Bruce E.; Keverline, Kathryn I.; Nie, Zhe; Navarro, Hernan; Kuhar, Michael J.; Carroll, F. Ivy

CS Chemistry and Life Sciences, Research Triangle Institute, Research Triangle Park, NC, 27709, USA

SO Journal of Medicinal Chemistry (2002), 45(18), 4029-4037  
CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

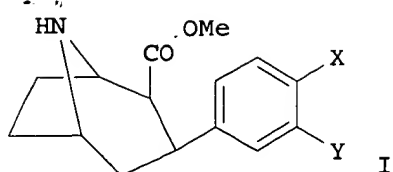
LA English

OS CASREACT 137:294860

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS

GI



AB The use was described of tropanes, such as I [X = C(:CH<sub>2</sub>)CH<sub>2</sub>F, CH:CHR, (CH<sub>2</sub>)<sub>2</sub>Q; Y = H, F, Cl, Br, iodo; Q = F, CH<sub>2</sub>F], as diagnostic and therapeutic agents for diseases assocd. with serotonin transporter dysfunction. These compds. bind to serotonin transporter protein with high affinity and selectivity. The invention provides methods of synthesis which incorporate radioisotopic halogens at a last step which permit high radiochem. yield and max. usable product life. The radiolabeled compds. of the invention are useful as imaging agents for visualizing the location and d. of serotonin transporter by PET and SPECT imaging.

AN 2002:556135 CAPLUS

DN 137:105845

TI Use of 4-haloethenylphenyl tropanes as serotonin transporter imaging agents

IN Goodman, Mark M.; Martarello, Laurent

PA USA

SO U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U.S. Ser. No. 558,916.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002099184	A1	20020725	US 2001-974729	20011009
	US 6399042	B1	20020604	US 2000-558916	20000426
	WO 2003031452	A2	20030417	WO 2002-US32473	20021009

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-131104P P 19990426

US 2000-558916 A2 20000426

US 2001-974729 A 20011009

OS MARPAT 137:105845

L8 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS

AB Iodinated 3.beta.-aryltropanes functionalized appropriately at the 2.beta.-, 8- and aryl positions display selective binding to either the dopamine or serotonin transporters.

AN 2002:175754 CAPLUS

DN 137:169673

TI Synthesis of iodinated 3.beta.-aryltropanes with selective binding to either the dopamine or serotonin transporters

AU Davies, Huw M. L.; Ren, Pingda; Kong, Norman X.; Sexton, Tammy; Childers, Steven R.

CS Department of Chemistry, State University of New York at Buffalo, Buffalo, NY, 14260-3000, USA

SO Bioorganic & Medicinal Chemistry Letters (2002), 12(6), 845-847

CODEN: BMCLE8; ISSN: 0960-894X

PB Elsevier Science Ltd.

DT Journal

LA English

OS CASREACT 137:169673

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD

## ALL CITATIONS AVAILABLE IN THE RE FORMAT

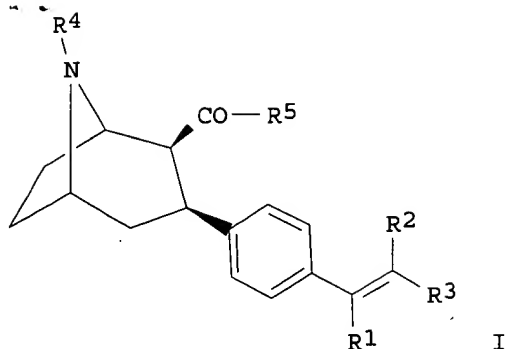
L8 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS  
AB Among the different Positron Emission Tomog. (PET) radioisotopes available for incorporation into serotonin transporter (SERT) ligands, fluorine-18 is the most attractive. Fluorine-18 can be prepd. in Curie quantities for incorporation into the SERT ligand in high specific activity by no-carrier-added nucleophilic substitution reactions. The synthesis in vitro and in vivo characterization and radiosynthesis of several new radioligand bioisosteres of 2.beta.-methoxycarbonyl-3.beta.-(4-ethyl-3-iodophenyl)nortropine, i.e., 2.beta.-methoxycarbonyl-3.beta.-[4-(2-[18F]fluoroethyl)-3-halophenyl]nortropine, [halo = Br, Cl, I] as potential PET SERT imaging agents, is reported.  
AN 2002:174810 CAPLUS  
DN 137:370247  
TI Fluorine-18 serotonin transporter ligands  
AU Goodman, M. M.; Chen, P.; Kilts, C. D.; Ely, T.; Davis, M.; Votaw, J.  
CS Emory Center for Positron Emission Tomography, Emory University, Atlanta, GA, 30320, USA  
SO Synthesis and Applications of Isotopically Labelled Compounds, Proceedings of the International Symposium, 7th, Dresden, Germany, June 18-22, 2000 (2001), Meeting Date 2000, 362-366. Editor(s): Pleiss, Ulrich; Voges, Rolf. Publisher: John Wiley & Sons Ltd., Chichester, UK.  
CODEN: 69CIJC; ISBN: 0-471-49501-8  
DT Conference  
LA English  
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS  
AB A series of compds. in the 4-fluoroalkyl-3-halophenyl nortropines family are described as diagnostic and therapeutic agents for diseases assocd. with serotonin transporter dysfunction. These compds. bind to serotonin transporter protein with high affinity and selectivity. The invention provides methods of synthesis which incorporate radioisotopic halogens at a last step which permit high radiochem. yield and max. usable product life. The radiolabeled compds. of the invention are useful as imaging agents for visualizing the location and d. of serotonin transporter by PET and SPECT imaging.  
AN 2000:772494 CAPLUS  
DN 133:331553  
TI 4-fluoroalkyl-3-halophenyl nortropines  
IN Goodman, Mark M.; Chen, Ping  
PA Emory University, USA  
SO PCT Int. Appl., 35 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000064491	A1	20001102	WO 2000-US11164	20000426
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1212103	A1	20020612	EP 2000-931952	20000426
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
JP 2002542306	T2	20021210	JP 2000-613481	20000426
PRAI US 1999-131104P	P	19990426		
WO 2000-US11164	W	20000426		
OS MARPAT 133:331553				

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS  
GI



AB Biol. active derivs. of the tropane ring system (I) [R1 = H, alkyl; R2 = H, I, radioisotopic halo, alkyl, alkyltin; R1,R2 may be fused by a -N(Me)CH=CH- to form a pyrrole ring; R3 = H, I, radioisotopic halo, alkyl; R4 = H, alkyl; R5 = H, alkyl] are provided which selectively bind either to the 5-HT or DA reuptake site, leading to compds. which have use for the treatment of clin. depression, attention deficit disorder, obesity and cocaine addiction. Thus, I [R4 = Me, R5 = Et, R3 = H, R1,R2 = -N(Me)CH=CH-] (II) is prepd. by reaction of N-methyl-2-(4-bromophenyl)pyrrole with (1R)-1-(8-methyl-8-azabicyclo[3.2.1]oct-2-en-2-yl)-1-propanone. II shows a 5-HT/NE potency ratio of >15,000 in serotonin and norepinephrine assay.

AN 2000:31245 CAPLUS

DN 132:78732

TI Tropane derivatives with selective binding to the serotonin reuptake transporters for treatment of mental illness and as intermediates in the formation of imaging diagnostic agents for depression

IN Davies, Huw M. L.; Kong, Norman; Childers, Steven R.

PA Wake Forest University, USA; The Research Foundation of State University of New York

SO U.S., 15 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6013242	A	20000111	US 1998-6915	19980113
	WO 2000044747	A1	20000803	WO 1999-US2141	19990201
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRAI US 1998-6915 A 19980113

OS MARPAT 132:78732

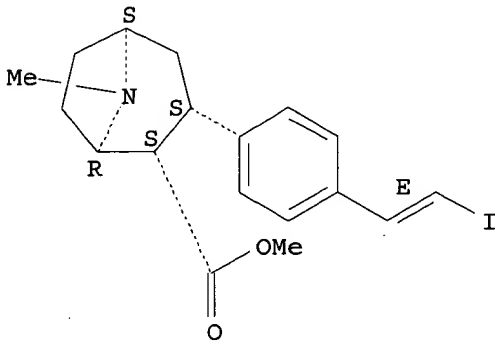
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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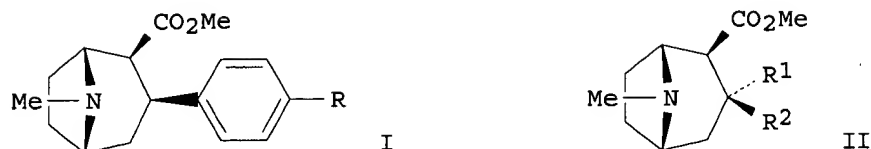


CN 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-[4-[(1E)-2-iodoethenyl]phenyl]-8-methyl-, methyl ester, (1R,2S,3S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.



RE.CNT 16      THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT



AB Substituted 3.beta.-phenyltropane-2.beta.-carboxylic acid Me esters I [R = Ph(CH<sub>2</sub>)<sub>m</sub>C.tplbond.C, HO(CH<sub>2</sub>)<sub>4</sub>, Ph(CH<sub>2</sub>)<sub>n</sub>; m = 0-3; n = 2-5] are prep'd. and evaluated for binding at the dopamine transporter to define the pharmacophore of the cocaine binding site at the dopamine transporter. I [R = Ph(CH<sub>2</sub>)<sub>m</sub>C.tplbond.C, HO(CH<sub>2</sub>)<sub>4</sub>; m = 0-3] are prep'd. by Sonogashira coupling reactions of alkynes with I (R = I); hydrogenation yields the tropanecarboxylates I [R = Ph(CH<sub>2</sub>)<sub>n</sub>; n = 2-5]. Negishi coupling of I (R = I) with Ph, benzyl, or .alpha.-styrylzinc chlorides yields I [R = Ph, PhCH<sub>2</sub>, PhC(:CH<sub>2</sub>)]. I [R = (E)-PhCH:CH, (Z)-PhCH:CH, PhCH<sub>2</sub>CH:CH] could not be prep'd. by hydrogenation of I [R = Ph(CH<sub>2</sub>)<sub>m</sub>C.tplbond.C; m = 0-1]; Stille coupling of I (R = I) with (E)- and (Z)-(Me<sub>3</sub>Sn)CH:CH(SnMe<sub>3</sub>) followed by iododestannylation, sepn. of stereoisomers, and Negishi coupling with phenylzinc or benzylzinc chlorides successfully yields I [R = (E)-PhCH:CH, (Z)-PhCH:CH, PhCH<sub>2</sub>CH:CH]. Naphthyltropanecarboxylates II (R<sub>1</sub> = H, 2-naphthyl; R<sub>2</sub> = 2-naphthyl, H) are prep'd. in a two-step sequence using Suzuki coupling of 2-naphthylboronic acid with a (triflyloxy)didehydrotropanecarboxylate followed by redn. of the unsatd. ester with SmI<sub>2</sub> and protonation of the enolate with trifluoroacetic acid. The presence of a previously unknown remote binding domain in the cocaine binding site of the dopamine transporter is indicated by the binding affinities of I [R = Ph(CH<sub>2</sub>)<sub>m</sub>C.tplbond.C, HO(CH<sub>2</sub>)<sub>4</sub>, Ph(CH<sub>2</sub>)<sub>n</sub>; m = 0-3; n = 2-5]. I (R = PhCH<sub>2</sub>CH<sub>2</sub>) binds to DAT with an IC<sub>50</sub> value of 5.14 nM; decreasing or increasing the length of the pendant phenylethyl moiety by one methylene group decreases the IC<sub>50</sub> values of I by factors of 102 and 68, resp. I (R = PhCH<sub>2</sub>CH<sub>2</sub>) binds nonselectively to monoamine transporters such as the serotonin and norepinephrine transporters. Electrostatic effects contribute significantly to the binding affinity of I to the dopamine transporter. The binding affinities of I suggest the existence of a more distant binding domain from the tropane rings of I in the cocaine binding site of the dopamine transporter. Steric barriers to binding of comp'ds. to the cocaine binding site of the dopamine transporter must be overcome for high binding affinity. I (R = PhCH<sub>2</sub>C.tplbond.C) is the most potent of the tropanecarboxylates tested for binding to the dopamine transporter with a IC<sub>50</sub> value of 1.82 nM; this comp'd. also binds tightly to the serotonin and norepinephrine transporters.

AN 2002:581988 CAPLUS

DN 137:294860

TI Synthesis and Transporter Binding Properties of 3.beta.-[4'-(Phenylalkyl, -phenylalkenyl, and -phenylalkynyl)phenyl]tropane-2.beta.-carboxylic Acid Methyl Esters: Evidence of a Remote Phenyl Binding Domain on the Dopamine Transporter

AU Blough, Bruce E.; Keverline, Kathryn I.; Nie, Zhe; Navarro, Hernan; Kuhar, Michael J.; Carroll, F. Ivy

CS Chemistry and Life Sciences, Research Triangle Institute, Research Triangle Park, NC, 27709, USA

SO Journal of Medicinal Chemistry (2002), 45(18), 4029-4037

CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

LA English

OS CASREACT 137:294860

IT 468726-54-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)